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ABSTRACT

After their 1969 inception as an electrical academy in a Philadelphia high school, the number of career academies grew steadily for two decades; since 1990, their growth has accelerated. Until the mid-1990s, they existed only as smaller units within high schools, but numerous high schools have since converted themselves entirely into career academies or other small learning communities. Career academies can be defined by these three basic features: they are small learning communities comprised of a cluster of students sharing some teachers and classes; they combine college-preparatory curriculum with a career theme, and they form employer partnerships. Fifteen years of California studies indicate that academy students outperform similar students in their schools in attendance, credits earned, grades, and graduation rates. Self selection casts doubt on evaluations of career academies. A random-assignment 10-site study confirms that students earn more credits and are more likely to participate in activities, but raises these two troubling issues: students in career academies score no higher on standardized tests, and teachers may be the schools' better ones. Career academies are compatible with major high school reform initiatives, including school-to-work, Coalition of Essential Schools, and small-schools movement. (YLB)

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LSS Spotlight on Student Success

A digest of research from the Laboratory for Student Success No. 606

Career Academies and High-School Reform Before, During, and After the School-to-Work Movement

by
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Educational reformers interested in improving the transition from school to work have been keenly interested in reconfiguring high schools to promote the combination of vocational and academic educational paths. Combining these two traditional paths can improve students' chances of college and career success. Reasons for integrating the paths include supporting the strong economic motives for continuing to postsecondary education and mitigating the effects of increasing after-school work hours.

After decades of development and evaluation, career academies based on integrated paths have been found effective in improving high-school students' performance and postgraduation options. Though not the only form of vocational-academic integration, career academies are distinguished by their durability, definability, and dependability in producing student success. This paper describes the academies' evolution, reviews their assessment, and explains their role in reconstructing high schools.

Evolution

After their 1969 inception as an electrical academy in a Philadelphia high school, the number of career academies grew steadily for two decades; since 1990, their growth has accelerated, particularly in California. Until the mid-1990s, career academies existed only as smaller units within high schools, but since then, numerous high schools have converted themselves entirely into career academies or into other small learning communities.

Career academies can be defined by three basic features:

- First, they are small learning communities comprised of a cluster of students sharing some teachers and classes. Both academic and technical teachers are dedicated to the academy's instructional and administrative concerns.

- Second, they combine college-preparatory curriculum with a career theme, such as health care or business. Academic courses meeting graduation and college entrance requirements are linked with career-focused courses. Teachers may coordinate both course types and teach work skills in both. Work-based learning opportunities link curriculum to career-related work.

- Third, career academies form employer partnerships. Community business representatives may advise academies, speak to classes, mentor students, supervise internships, and provide financial support.

The first career academies in Philadelphia focused on retention and vocational preparation, but soon they evolved to include college preparation. In 1981, California established computer and electronics academies, and the success of these and similar academies led to strong legislative support. California academies, now ranging over 25 career fields, advanced the notion of simultaneous college and career preparation.

Other regions, especially cities, have established career academies on the California model. In the 1980s, American Express joined with other companies, now more than 100, to create the National Academy Foundation. The foundation provides curriculum, technical support, and professional development for teachers. Its college-oriented, 11th- and 12th-grade academies are moving towards adding earlier years of high school and more coordination with academic classes.

Effects on Performance

Fifteen years of California studies indicate that academy students outperform similar students in their schools in attendance, credits earned, grades, and graduation rates. Although state-funded academies in California must recruit a majority of disadvantaged students, dropout rates are half the general rate, and academy graduates are as likely as their schoolmates to be enrolled in postsecondary schools. Both academic-track and career-academy graduates are more likely to enroll in a four-year college than general-track graduates.

Academy graduates are more likely to have low-income, minority backgrounds. But this accounted for, they are more likely to graduate than other students in their districts, indicating that academies help low-income students

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finish high school and college. Lower academic standards are not involved in these results. Although courses within academies awarded lower grades than nonacademy courses, academy students obtained higher grades than nonacademy students. Similar results appear in studies outside California.

Self-selection, however, casts doubt on evaluations of career academies, since performance may result from the initiative or parental support of the students who choose academy enrollment and not from the academy's curriculum. Similarly, although students in small schools like academies are less likely to drop out, graduation-encouraging characteristics of the communities of the successful students cannot be ruled out as causes.

The random-assignment procedure, very rare in school-structure research, can eliminate this uncertainty. The Manpower Demonstration Research Corporation (MDRC) conducted a major, random-assignment, 10-site study beginning in 1993. The MDRC results confirm earlier findings: students in career academies earn more credits toward graduation and are more likely to participate in activities like volunteer projects than controls. The greatest benefits accrude to the career-academy subgroup of students at highest risk of school failure, whose attendance, credits, extracurricular participation, and avoidance of criminal behavior surpass that of a control subgroup's and whose dropout rate is 11% lower.

However, the MDRC study raised two troubling issues. First, students in career academies score no higher on standardized tests than controls, suggesting that academies do not affect the best regarded measure of learning. The earnings benefits of completing an additional year of high school have proven greater than those of one grade-equivalent year of test-score gain, so the academies' graduation-rate benefit may outweigh their lack of effect on scores. It remains unclear, nonetheless, whether the instruction is better in academies. Experimental students reported greater academic support than controls, and many developed college aspirations, but no quantitative evidence of increased learning in career academies has arisen. Second, the MDRC study left it undetermined whether the teachers in career academies are the schools' better ones. Academy teachers are not better educated or more experienced, but because they are not randomly assigned, they may be superior in less tangible ways. The superiority of academy students could arise from a shift of better teachers to the academy from the rest of the school. Only long-term performance comparisons after academy introduction could determine the impact and causes of such a shift.

Reconstructing High Schools

One reason why the number of career academies has grown is that they are compatible with several major high-school reform initiatives, including school-to-work, the Coalition of Essential Schools, and the small-schools movement. Like career academies, school-to-work programs like the High Schools That Work project attempt to teach career skills and prepare students for postsecondary specialization. Indeed, academies have been recognized as school reform models. Essential Schools, which focus on improving the intellectual, social, and ethical qualities of schools, have endorsed the academic quality of career academies, which apply many Essential School principles, such as fostering deep and active engagement in learning, and personal relationships among students and teachers. Indeed, many Essential Schools contain career academies.

Moreover, the broader small-schools movement, now supported by federal and foundation funding, focuses on developing personal learning communities, for which career academies provide effective models. As high schools decentralize, career academies may prove useful units of subdivision. Thus, among multiple strategies for reconstructing high schools, career academies are an effective element.

High Schools to Small Learning Communities

The MDRC study, limited to career academies within high schools, cannot suggest what benefits the current transformation of large high schools into groups of small learning communities may have. Preliminary results are promising in New York, Philadelphia, and Chicago, where substantial numbers of students have enrolled in small learning communities. Small but significant gains over traditional high-school students have been seen, such as fewer absences, higher grades, and in some cases lower dropout rates. Because the benefits of career academies may not generalize when instituted schoolwide—instead of as smaller units within the larger school, units which may attract especially motivated teachers and students—we should determine whether career academies and other small learning communities really do improve performance when implemented schoolwide before initiating widespread reform.

Foreseeable problems of institutionalized small learning communities include loss of voluntarism, overloading the community's capacity to provide school-to-work partnerships, and the return of tracking in a hierarchy of small learning communities. Monitoring inequitable enrollment would combat this problem, as would creating career- or theme-based small learning communities to recruit teachers and students.

Conclusion

Rigorous evaluations have found that career academies within larger high schools improve academic performance and retention. Growing numbers of secondary institutions are not only adopting career academies but grouping all students and teachers into such small learning communities. Whether this larger reconstruction will have the same benefits is an urgent question for research. As the school-to-work movement loses the attention of educators more focused on standards and accountability because of students' college aspirations, among its legacies will be new employer–educator partnerships and higher career awareness aligned with postsecondary goals. Combining standards with career preparation, career academies may be one of the most valuable and enduring legacies of the movement.

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